

POLISHING MEMBER AND POLISHING DEVICE

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Applicant(s): NIKON CORP
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Abstract

PROBLEM TO BE SOLVED: To reduce the term of the polishing process by improving the polishing speed, extend the service life of a polishing member by making the abrasion of the polishing member even, and furthermore, detect a polishing end point while maintaining a good polishing condition, by solving the problem of the loss of the optical information resulting from the reduction of an abrasive material existing on the polishing member, in the optical end point detecting method in a semiconductor flattening technology.

SOLUTION: This polishing member is composed solid practically from a molded high polymer, and groove structures 11b are provided on its polishing surface 11a. The pitch of the grooves is made in the scope 0.3 mm to 2 mm, and it is changed according to the position of the polishing surface. In the polishing member having the groove structures, a plain light permeable area is provided partially, and the light transmissive area is made to compose its plane at the same height as the plane of the polishing surface.

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**(54) POLISHING MEMBER
AND POLISHING DEVICE**

(57) Abstract:

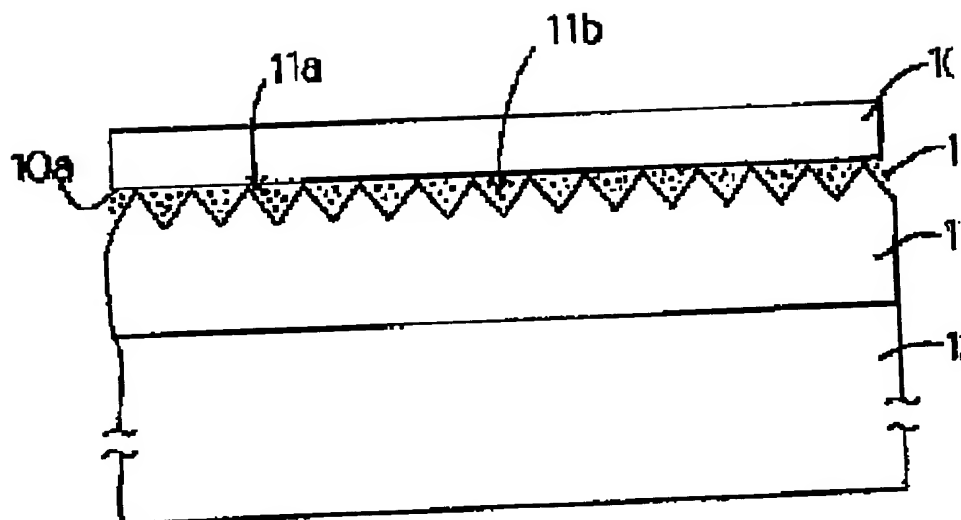
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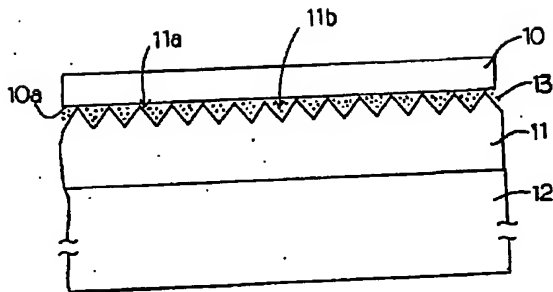
(54) 【発明の名称】 研磨部材及び研磨装置

(57) 【要約】

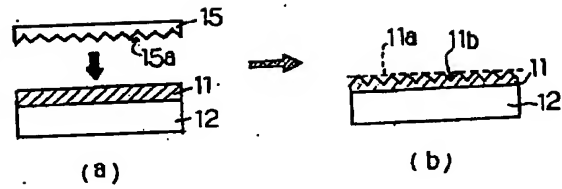
【課題】 研磨速度を向上させて研磨加工の工程を短縮でき、更に研磨部材の摩耗を均一にし、その使用寿命を延ばすことのできる研磨部材を提供する。また、半導体平坦化技術における光学的終点検出法において、研磨部材上に存在する研磨剤による散乱等による透過率の低下に起因する光学情報の損失の問題点を解決し、良好な研磨状態を維持しつつ研磨終点検出の可能な研磨部材を提供する。

【解決手段】 この研磨部材は、モールドされた高分子樹脂から実質的に中実で構成され、その研磨面11aに溝構造11bを備える。また、溝のピッチを、0.3mm～2mmの範囲とし、また、研磨面の位置に応じて変化させている。また、溝構造を有する研磨部材において研磨面に露出するように平坦な光透過性領域を部分的に設け、この光透過性領域が研磨面の平面と同一高さの平面を構成するようにする。

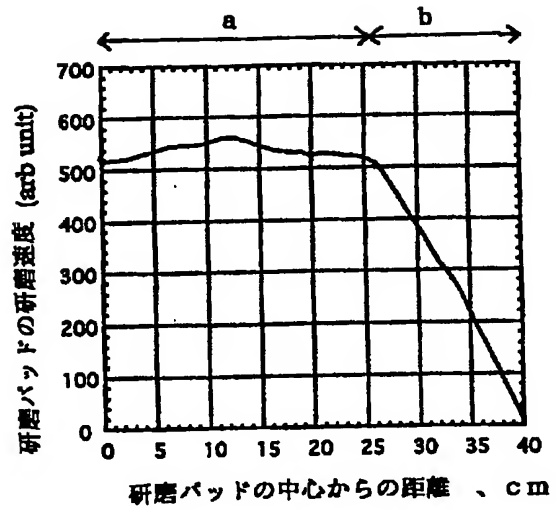
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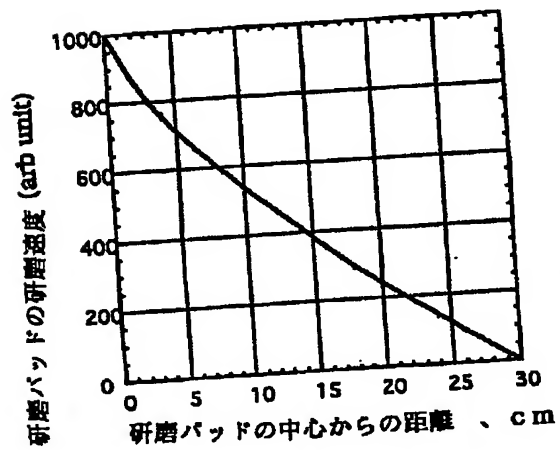
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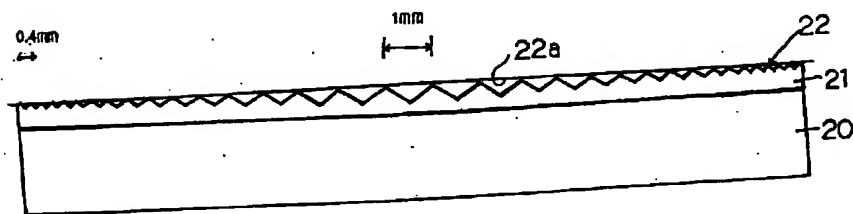
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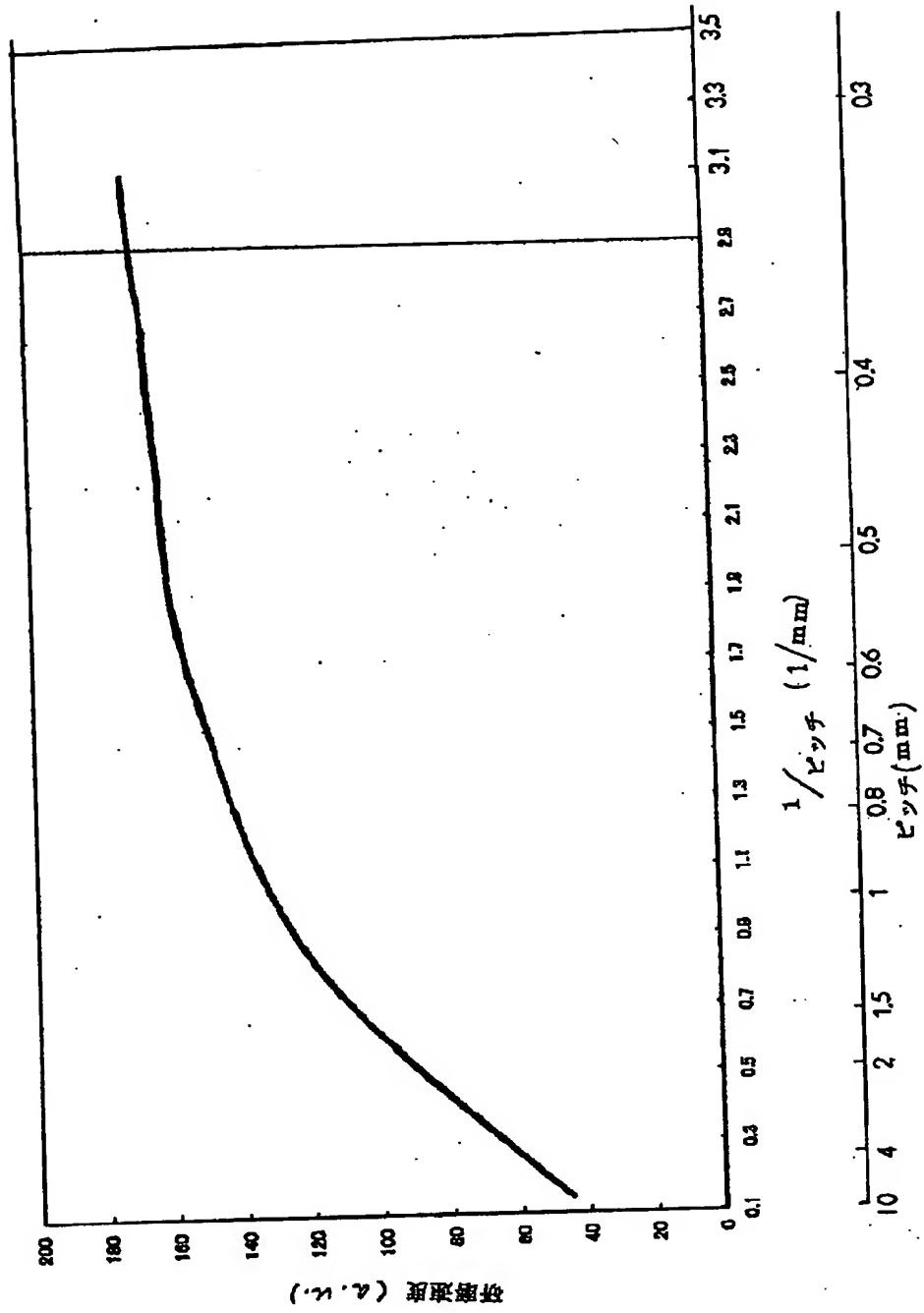
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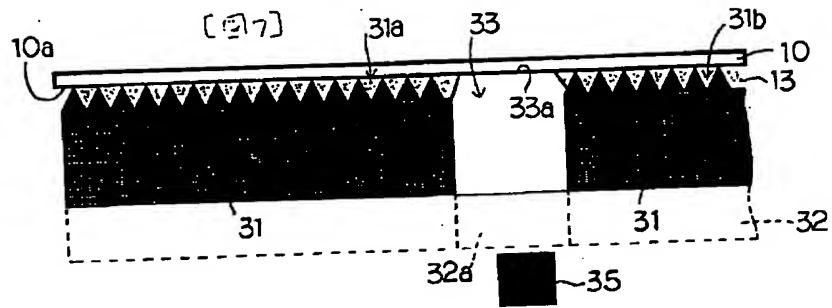
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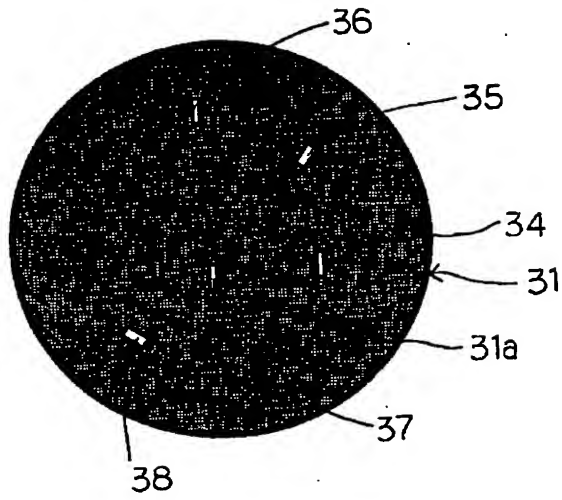
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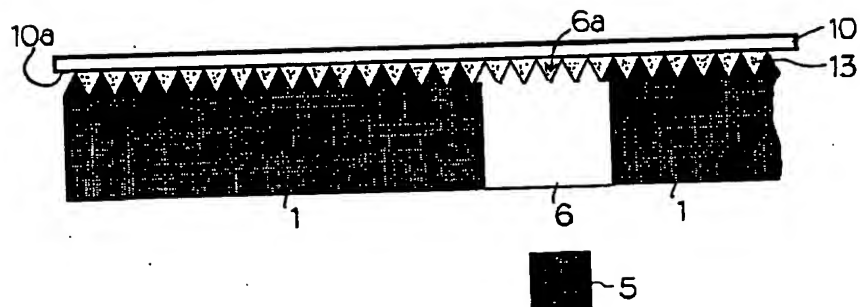
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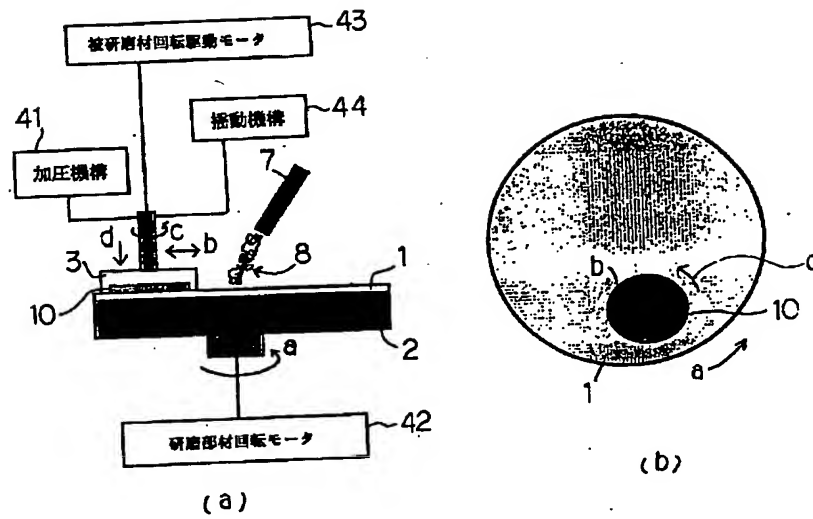
【図8】



【図10】



【図9】



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